

REMARKS/ARGUMENTS

Claims 1-11 are presently pending in this application. The specification is objected to, and each of claims 1-11 are substantively rejected. A Preliminary Amendment was filed via facsimile on August 12, 2003. In a telephone conference between the Examiner and the undersigned on June 21, 2004, it was determined that the Preliminary Amendment has not yet been matched with to file. To expedite prosecution, Applicant submits herewith a copy of that Preliminary Amendment along with an "Auto-Reply Facsimile Transmission" sheet, evidencing successful transmission to the U.S. Patent and Trademark Office. Claims 1, 5, 6, 7, 8, and 10 are currently amended to address possible antecedent basis issues.

Objection to the Specification

The disclosure was objected to because a Brief Description of the Drawing is absent. Applicant has amended the Specification to include a Brief Description of the Drawings. Withdrawal of this objection is respectfully requested.

Rejection Under 35 U.S.C. §112

Claims 1-11 were rejected under 35 U.S.C. §112, second paragraph, as allegedly failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office Action alleges that the relationship between the claimed process steps to the flow chart in the drawing is unclear, and requests explanation of where the claimed steps are located in the flow chart. The Office Action also alleges that recitation of "precipitation of metal" in claim 3 is unclear.

Flow Chart

According to MPEP 2174, if a description or the enabling disclosure of a specification is not commensurate in scope with the subject matter encompassed by a claim, that fact alone does not render the claim imprecise or indefinite or otherwise not in compliance with 35 U.S.C. 112, second paragraph; rather, the claim is based on an insufficient disclosure (35 U.S.C. 112, first paragraph) and should be rejected on that ground.

For the purposes of expediting prosecution, however, the issue of whether the claims are supported by a sufficient disclosure is addressed as follows. It is well established that an enabling disclosure is not limited to the drawings; claims can find support in the specification. Elements of presently pending claim 1 can find support in specification as follows.

See, for example, page 3, lines 4-10.

Thus, according to the present invention, there is now provided a hydrometallurgical process for producing metal-containing sulfide ores and concentrates, comprising reacting said metal-containing sulfide with concentrated sulfuric acid at a temperature of between about 300°C and 400°C in the presence of oxygen to produce a solid metal sulfate product and a gaseous product which is primarily SO₃, wherein said metal is selected from the group consisting of iron, copper, zinc, nickel, cobalt and manganese.

See also the paragraph bridging pages 5 and 6, referring to Example 1.

A sample of sulfide waste was milled in a ball mill to a size -75 micron -100%, then it was mixed at room temperature with concentrated sulfuric acid in a ratio 1:0.94 by weight. Mixing was made during 30 min., then the mixture obtained was loaded to a tube furnace, where the sulfatization process occurred at 338°C. Air was blown during the sulfatization process. The amount of air required was 1900 l/kg of sulfide waste, that is 200% of the amount theoretically required according to reaction (7). Sulfatization time is 2 hours. Gas SO₃ escaping at sulfatization is forwarded to scrubbers for precipitations I, II or III.

It is respectfully submitted that the presently pending claims find support in the specification. Illustrative representations of claim elements can also be found in **Fig. 1**, toward the top of the figure. For example, sulfuric acid can be represented as the "H₂SO₄," the sulfidic materials can be represented as the "sulfide waste," and the reaction between the two can be represented by the "mixing" and the "sulfatization." SO₃ can be represented by the SO₃.

Claim 3

The Preliminary Amendment of August 12, 2003 amended claim 3 to recite "metallic sulfates" instead of "metal" thus mooting this rejection. Withdrawal of this rejection is respectfully requested.

As an informal matter, it is noted that the instant application names a sole inventor, and not joint inventors, as suggested by the Office Action on page 3.

First Rejection Under 35 U.S.C. §103

Claims 1, 2, 5, and 7 were rejected under 35 U.S.C. §103(a) as allegedly obvious in light of U.S. Patent No. 4,003,740 to Huggins et al. ["Huggins"]. This rejection is respectfully traversed.

According to MPEP 2142, establishment of a *prima facie* case of obviousness requires, among other things, that the cited reference, or an obvious modification thereof, must teach or suggest all the claim limitations. Applicant respectfully submits that the Office Action has not met either of these requirements.

Briefly, presently pending claim 1 is drawn to a method that includes, *inter alia*, reacting metal-containing sulphidic materials with concentrated sulfuric acid in the presence of oxygen to produce a solid metal sulfate product

Huggins is cited as teaching a process of forming copper sulfate from ore using concentrated sulfuric acid. The Action acknowledges that Huggins fails to explicitly disclose reacting sulfidic materials in the presence of oxygen, but asserts that it would have been obvious to the artisan to expect oxygen to be present during the reaction. Although it is not clear whether this is an inherency rejection, an obviousness rejection, or both, it is submitted that the cited reference renders the presently pending claims neither inherently anticipated nor obvious.

Huggins describes the liberation of oxygen during a "roasting" step, wherein sulfate is heated to produce a roasted solid. See Huggins at col. 3, lines 41-57, col. 4, lines 37-49, and claim 1, step (f). However, this roasting step is reported as occurring *subsequent* to the step where sulfidic residual material is treated with sulfuric acid and heat to form the sulfate. See Huggins at col. 4, lines 29-36 and claim 1, step (c). Thus, even assuming the proposed modification of Huggins, this reference still fails to disclose a method that includes reacting metal-containing sulphidic materials with concentrated sulfuric acid in the presence of oxygen to produce a solid metal sulfate product, as recited in presently pending claim 1.

Applicant submits, consequently, that a *prima facie* case of obviousness has not been made with respect to claim 1. Claims 2-11 depend from, either directly or indirectly, claim 1. Applicant submits that because a *prima facie* case of obviousness has not been established against claim 1, obviousness does not apply to claims 2-11. Withdrawal of this rejection is respectfully requested.

Second Rejection Under 35 U.S.C. §103

Claims 1-11 were rejected under 35 U.S.C. §103(a) as allegedly obvious in light of U.S. Patent No. 3,860,696 to McGauley et al. ["McGauley"]. This rejection is respectfully traversed.

As noted above, presently pending claim 1 is drawn to a method that includes, *inter alia*,

reacting metal-containing sulphidic materials with concentrated sulfuric acid in the presence of oxygen to produce a solid metal sulfate product

McGauley is cited as teaching the production of iron sulfate from iron sulfide mineral feed. Yet McGauley fails to teach or suggest reacting metal-containing sulphidic materials with concentrated sulfuric acid in the presence of oxygen, as presently claimed. And there is no suggestion that such a modification of McGauley would be obvious. What is more, as discussed above, Huggins fails to teach these presently claimed elements, and therefore fails to remedy this deficiency of McGauley. Because McGauley, either alone or in combination with Huggins, fails to teach each and every element of presently pending claim 1, withdrawal of this rejection is respectfully requested.

Claims 2-11 depend from, either directly or indirectly, claim 1. Applicant submits that because a *prima facie* case of obviousness has not been established against claim 1, obviousness does not apply to claims 2-11. Withdrawal of this rejection is respectfully requested.

Appl. No. 09/830,830
Amdt. dated June 28, 2004
Reply to Office Action of February 27, 2004

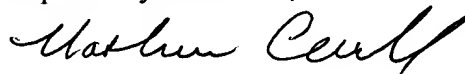
PATENT

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



Nathan S. Cassell
Reg. No. 42,396

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 650-326-2400
Fax: 415-576-0300
Attachments

- Preliminary Amendment of August 12, 2003
- including
 - Transmittal Form
 - Facsimile Communication Result Report, and
 - USPTO Auto-Reply Facsimile Transmittal

NSC:sr
60241252 v1

TO: Auto-reply fax to 16503262422 COMPANY:



Auto-Reply Facsimile Transmission



UNITED STATES
PATENT AND
TRADEMARK OFFICE

TO:

Fax Sender at 16503262422

Fax Information

Date Received:

8/12/03 5:10:09 PM [Eastern Daylight Time]

Total Pages:

6 (including cover page)

ADVISORY: This is an automatically generated return receipt confirmation of the facsimile transmission received by the Office. Please check to make sure that the number of pages listed as received in Total Pages above matches what was intended to be sent. Applicants are advised to retain this receipt in the unlikely event that proof of this facsimile transmission is necessary. Applicants are also advised to use the certificate of facsimile transmission procedures set forth in 37 CFR 1.8(a) and (b), 37 CFR 1.6(f). Trademark Applicants, also see the Trademark Manual of Examining Procedure (TMEP) section 306 et seq.

Received
Cover
Page
=====>

AUG 12, 2003 1:11PM 116 PR 650 326 2422		NO. 000 0.146													
<p>PTO/E/211 (05-03) Approved for use through 04/01/2005. OAS 0451-0031 U.S. Patent and Trademark Office U.S. DEPARTMENT OF COMMERCE</p> <p>Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.</p>															
<p>TRANSMITTAL FORM (to be used for all correspondence after initial filing)</p>		<table border="1"> <tr> <td>Application Number</td> <td>09/830,830</td> </tr> <tr> <td>Filing Date</td> <td>April 30, 2001</td> </tr> <tr> <td>First Named Inventor</td> <td>Flax, Solomon</td> </tr> <tr> <td>Art Unit</td> <td>1742</td> </tr> <tr> <td>Examiner Name</td> <td>Lewis, Battimore, K. L.</td> </tr> <tr> <td>Attorney Docket Number</td> <td>082845-000000US</td> </tr> </table>		Application Number	09/830,830	Filing Date	April 30, 2001	First Named Inventor	Flax, Solomon	Art Unit	1742	Examiner Name	Lewis, Battimore, K. L.	Attorney Docket Number	082845-000000US
Application Number	09/830,830														
Filing Date	April 30, 2001														
First Named Inventor	Flax, Solomon														
Art Unit	1742														
Examiner Name	Lewis, Battimore, K. L.														
Attorney Docket Number	082845-000000US														
Total Number of Pages in This Submission: 6															
<p>ENCLOSURES (Check all that apply)</p> <table border="1"> <tr> <td> <input type="checkbox"/> Few Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Preliminary Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavit/Declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.63 </td> <td> <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Claiming-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) </td> <td> <input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interference <input type="checkbox"/> Appeal Communication to Group (Appeal Notices, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Request Letter <input type="checkbox"/> Other Enclosure(s) (please identify below) </td> </tr> </table>				<input type="checkbox"/> Few Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Preliminary Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavit/Declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.63	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Claiming-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interference <input type="checkbox"/> Appeal Communication to Group (Appeal Notices, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Request Letter <input type="checkbox"/> Other Enclosure(s) (please identify below)									
<input type="checkbox"/> Few Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Preliminary Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavit/Declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.63	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Claiming-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interference <input type="checkbox"/> Appeal Communication to Group (Appeal Notices, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Request Letter <input type="checkbox"/> Other Enclosure(s) (please identify below)													
Remarks		The Commissioner is authorized to charge any additional fee to Deposit Account 20-1430.													
<p>SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT</p> <table border="1"> <tr> <td>Firm or Individual</td> <td>Younis and Younsaid and Crew LLP</td> <td>Reg. No.</td> <td>42,398</td> </tr> <tr> <td>Signature</td> <td colspan="3"><i>Nathan G. Cassini</i></td> </tr> <tr> <td>Date</td> <td colspan="3">August 12, 2003</td> </tr> </table>				Firm or Individual	Younis and Younsaid and Crew LLP	Reg. No.	42,398	Signature	<i>Nathan G. Cassini</i>			Date	August 12, 2003		
Firm or Individual	Younis and Younsaid and Crew LLP	Reg. No.	42,398												
Signature	<i>Nathan G. Cassini</i>														
Date	August 12, 2003														
<p>CERTIFICATE OF MAILING</p> <p>I hereby certify that this correspondence is being transmitted to the Patent and Trademark Office, Fax No. (706) 872-9310 on August 12, 2003.</p> <table border="1"> <tr> <td>Typed or printed name</td> <td>Linda A. Hunsicker</td> <td>Date</td> <td>August 12, 2003</td> </tr> <tr> <td>Signature</td> <td colspan="3"><i>Linda A. Hunsicker</i></td> </tr> </table>				Typed or printed name	Linda A. Hunsicker	Date	August 12, 2003	Signature	<i>Linda A. Hunsicker</i>						
Typed or printed name	Linda A. Hunsicker	Date	August 12, 2003												
Signature	<i>Linda A. Hunsicker</i>														
<p><small>The collection of information is required by 37 CFR 1.8. The information is required to obtain or retain a benefit by the public which is to be (and by the USPTO in practice) an application. Confidentiality is governed by 38 U.S.C. 122 and 37 CFR 1.54. This collection is exempted to have 12 minutes to complete, including preparing, reviewing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1480, Alexandria, VA 22313-1480. DO NOT SEND FILES OR COMPLETED FORMS TO THE ADDRESS. SEND TO: Communications for Patents, P.O. Box 1480, Alexandria, VA 22313-1480.</small></p> <p><small>00018046 v1</small></p> <p><small>If you need assistance in completing this form, call 1-800-PTO-5198 (1-800-768-1988) and select option 2.</small></p>															
<p>Received from: 16503262422 at 08/12/03 5:10:09 PM [Eastern Daylight Time]</p>															

TTI TTC-PA 650-336-2422

FILE MODE	OPTION	ADDRESS (GROUP)	RESULT	PAGE
048 MEMORY TX		##19645#17038729306	OK	P. 6/6



REASON FOR ERROR

E-1) HANG UP OR LINE FAIL
E-3) NO ANSWER

E-2) BUSY
E-4) NO FACSIMILE CONNECTION

PTO/SB/21 (05-03)

Approved for use through 04/30/2003. OMB 0851-0031

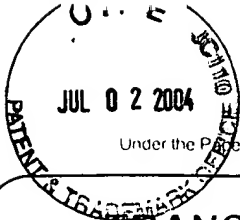
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM <i>(to be used for all correspondence after Initial filing)</i>	Application Number	09/830,830	
	Filing Date	April 30, 2001	
	First Named Inventor	Flax, Solomon	
	Art Unit	1742	
	Examiner Name	Lewis Baltimore, K.L.	
Total Number of Pages in This Submission	6	Attorney Docket Number	082845-000000US

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Preliminary Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below)
Remarks		The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

JUL 02 2004



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PTO/SB/21 (05-03)

Approved for use through 04/30/2003 OMB 0651-0031

U.S. Patent and Trademark Office U.S. DEPARTMENT OF COMMERCE

TRANSMITTAL FORM (to be used for all correspondence after initial filing)		Application Number	09/830,830
		Filing Date	April 30, 2001
		First Named Inventor	Flax, Solomon
		Art Unit	1742
		Examiner Name	Lewis Baltimore, K.L.
Total Number of Pages in This Submission	6	Attorney Docket Number	082845-000000US

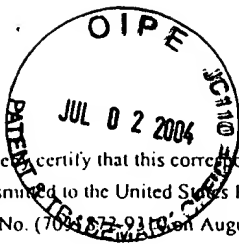
ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Preliminary Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below)
Remarks		The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT		
Firm or Individual	Townsend and Townsend and Crew LLP Nathan S. Cassell	
	Reg. No. 42,396	
Signature		
Date	August 12, 2003	

CERTIFICATE OF MAILING		
I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office, Fax No. (703) 872-9310 on August 12, 2003		
Typed or printed name	Leticia A. Hernandez	
Signature		Date August 12, 2003

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

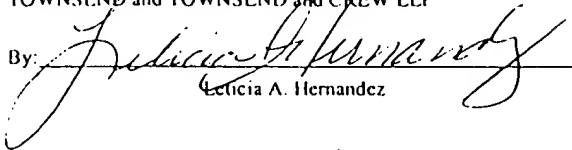
If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (703) 572-9319 on August 12, 2003.

TOWNSEND and TOWNSEND and CREW LLP

By:


Leticia A. Hernandez

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Solomon Flax

Application No.: 09/830,830

Filed: April 30, 2001

For: PROCESS FOR PRODUCING
METAL-CONTAINING SULFIDE
ORES

Customer No.: 20350

Confirmation No.:

Examiner: Lewis Baltimore, K.L.

Technology Center/Art Unit: 1742

PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Prior to examination of the above-referenced application, please enter the following amendments and remarks:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 4 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) A hydrometallurgical process for treating **[producing]** metal-containing sulfide ores and concentrates, comprising reacting said metal-containing sulphidic materials **[sulfide]** with concentrated sulfuric acid at a temperature of between about 300°C and 400°C in the presence of oxygen to produce a solid metal sulfate product and a gaseous product which is primarily SO₃, wherein said metal is selected from the group consisting of iron, copper, zinc, nickel, cobalt and manganese.
2. (original) A process according to claim 1, wherein said metal sulfate product is then leached with a dilute solution of sulfuric acid, having a concentration of between 5% and 35% to extract metal values therefrom and to form a metal-containing solution.
3. (currently amended) A process according to claim 2, wherein said SO₃ gaseous product formed from said reaction is subsequently combined with said metal-containing solution in stages to raise the concentration of sulfuric acid in said solution to about 35% to 50% and to effect the stage-wise precipitation of metallic sulphates **[metal]** from said solution.
4. (currently amended) A process according to claim 1 **[4]**, wherein the amount of sulfuric acid upon mixing with one weight portion of sulfide ore is ≥ 0.94 weight portions of 98% sulfuric acid.
5. (original) A process according to claim 1, wherein the sulfatization process is carried out at a temperature of between 330°C and 350°C.

6. (currently amended) A process according to claim 1, wherein the sulfatization process is carried out in the presence of [at constant oxidation with] oxygen from the air, its amount being $\geq 150\%$ of the stoichiometrically required amount to convert the sulphide content of the starting material to SO_3 .

7. (original) A process according to claim 1, wherein leaching of the sulfatized product is carried out in solution of sulfuric acid, having a concentration of about 15% to 25%.

8. (original) A process according to claim 3, wherein separation of metal sulfate from the solution was made by its precipitation in sulfuric acid solutions of 40% 45% H_2SO_4 .

9. (original) A process according to claim 8, wherein a high concentration of sulfuric acid is achieved by saturation of the solution with gas SO_3 at room temperature.

10. (original) A process according to claim 9, wherein purification of sulfuric acid from the admixtures aimed at production of the acid ready for sale was performed by saturation with gas SO_3 up to a concentration of sulfuric acid of 98.3%.

11. (original) A process according to claim 1, wherein said metal is iron.

REMARKS/ARGUMENTS

Claims 1-11 remain in this application. Claims 1, 3, 4, and 6 have been amended.

At the time of filing the present application, Applicant included a copy of a letter, dated April 9, 2001, addressed to the International Bureau of WIPO. This letter was originally submitted to WIPO in connection with an Article 19 amendment to the claims of the PCT application. Due to a clerical oversight, the amended claims were not included in the application documents of the present application.

This Preliminary Amendment serves to clarify that the pending claims in the instant US National Stage application are to conform with those as provided in the PCT Article 19 Amendment.

As stated in the letter of April 9, 2001, the claims are amended for the following reasons.

Claim 1 has been amended to clarify that the metal containing sulfide ores and concentrates are "treated" and that it is said metal containing sulfide ores and concentrates, i.e., the metal containing sulphidic materials, which are reacted.

Claim 3 has been amended to indicate, as seen in the examples, that the preferred embodiment is a stage-wise process and to clarify the precipitation of metallic sulphates from the solution.

The dependency of claim 4 has been corrected.

Claim 6 has been amended to more precisely describe the claimed subject matter.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Appl. No. 09/830,830
Amdt. dated August 12, 2003
Preliminary Amendment

PATENT

Respectfully submitted,



Nathan S. Cassell
Reg. No. 42,396

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: 650-326-2400
Fax: 415-576-0300
NSC:nsc
60014988 v1